

**Notice of Allowability**

Application No.

10/806,025

Examiner

Olga Asinovsky

Applicant(s)

BANERJEE ET AL.

Art Unit

1711

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/11/2006.
2. ☒ The allowed claim(s) is/are 1-27 and 78-82.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **REASONS FOR ALLOWANCE**

1. The following is an examiner's statement of reasons for allowance: The claimed invention is a polymer comprising: a surface defined by the polymer; a branched polyethyleneimine (B-PEI) core within the surface; a plurality of primary amine groups at the surface; and a plurality of secondary and tertiary amine groups positioned at the core; wherein the polymer is a flexible hyperbranched dendron polymer. The independent claim 11 discloses a hyperbranched dendron polymer having having a randomly branched structure, a molecular weight of about 10 to 25 KD, and a ratio of secondary to tertiary amine groups of less than or equal to about 1.5 to 1. The independent claim 20 discloses a hyperbranched dendron polymer made by a process comprising iterative attachment of ethyleneimine moieties to a branched polyethyleneimine core, wherein the process increases the amount of secondary and tertiary amines in the polymer while maintaining a plurality of primary amines on a surface of the polymer.

2. Reference of record is Yin et al.' 5,919,442. Yin discloses a hyper comb-branched polymer having a linear core chain based on 2-ethyl-2-oxazoline and having ends terminated with polyethyleneimine. The elongated core has a plurality of arms branched to said core, col. 3, line 40-41.

#### **(a) Response to Arguments**

3. Applicant's arguments, see Remarks, filed 01/11/2006, with respect to claims 1-27 have been fully considered and are persuasive. The rejection of claims 1-27 of being anticipated by Yin et al U.S. Patent 5,919,442 has been withdrawn.

Art Unit: 1711

4. The argument is that Yin does not disclose a branched polyethyleneimine core, instead of Yin discloses an elongated core based on 2-ethyl-2-oxazoline and having ends terminated with polyethyleneimine. Yin does not disclose a plurality of secondary and tertiary amine groups positioned at the core, for the present claims 1 and 20. Yin does not disclose a ratio of a secondary to tertiary amine groups of less than or equal to about 1.5 to 1, for the present independent claim 11.

Claims 1-27 and 78-82 are deemed to contain allowable subject matter.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1711

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*O.A.*

March 09, 2006

Olga Asinovsky  
Examiner  
Art Unit 1711



James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700